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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,706	01/28/2005	Verena Stangl	2958-128	7467

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EXAMINER

BRADLEY, CHRISTINA

ART UNIT PAPER NUMBER

1654

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/522,706

**Applicant(s)**

STANGL ET AL.

**Examiner**

Christina Bradley

**Art Unit**

1654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-26 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-10 and 13-24, drawn to naturally occurring proteasome inhibitors comprising peptide derivatives which have a C-terminal epoxy keton structure, beta-lacton-derivatives, aclacinomycin A, lactacystin, clastolactacystein.

Group II, claim(s) 1-10 and 13-24, drawn to synthetic proteasome inhibitors comprising modified peptide aldehydes such as N-carbobenzoxo-L-leuciny-L-leuciny-L-leucinal, or the boric acid derivative of MG232, N-carbobenzoxo-Leu-Nva-H, N-acetyl-L-leuciny-L-leuciny-L-norleucinal, N-carbobenzoxo-Ile-Glu(Obut)-Ala-Leu-H.

Group III, claim(s) 1-10 and 13-24, drawn to peptides comprising an  $\alpha,\alpha$ -epoxyketone-structure, vinyl-sulfones such as carbobenzoxo-L-leuciny-leuciny-L-leucin-vinyl-sulfon or 4-hydroxy-5-iodo-3-nitrophenylacetyl-L-leuciny-Leuciny-L-leucin-vinyl-sulfon (NLVS).

Group IV, claim(s) 1-10 and 13-24, drawn to glyoxal- or boric acid residues such as pyrazyl-CONH(CHPhe)CONH(Chisobutyl)B(OH)<sub>2</sub> and dipeptidyl-boric acid derivatives.

Group V, claim(s) 1-10 and 13-24, drawn to pinacol-ester such as benzyloxycarbonyl(Cbz)-Leu-leuboro-Leu-pinacol-ester.

Group VI, claim(s) 11 and 25, drawn to a proteasome inhibitor interfering with proteasomal gene expression selected from a group comprising antisense RNA, double stranded RNA and oligonucleotides hybridizing with a DNA sequence encoding at least one component of the proteasome complex.

Group VII, claim(s) 12 and 26, drawn to a proteasome inhibitor interfering with proteasomal gene expression selected from a group comprising a knock out construct.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: compositions comprising proteasome inhibiting

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agents for the treatment of ischemic disorders including myocardial infarction or ischemia are disclosed in WO 01/4750 and WO 99/09006. Therefore, unity of invention is lack *a posteriori*.

This application contains claims directed to and discloses more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows: aclacinomycin A, lactacystin, clastolactacystein, N-carbobenzoxy-L-leuciny-L-leuciny-L-leucinal, N-carbobenzoxy-Leu-Nva-H, N-acetyl-L-leuciny-L-leuciny-L-norleucinal, N-carbobenzoxy-Ile-Glu(Obut)-Ala-Leu-H, carbobenzoxy-L-leuciny-leuciny-L-leucin-vinyl-sulfon, 4-hydroxy-5-iodo-3-nitrophenylacetyl-L-leuciny-Leuciny-L-leucin-vinyl-sulfon, pyrazyl-CONH(CHPhe)CONH(Chisobutyl)B(OH)<sub>2</sub>, benzyloxycarbonyl(Cbz)-Leu-leuboro-Leu-pinacol-ester, PS-314, PS-519, PS-273, PS-293, PS-296, PS-303, PS-321, PS-334, PS-325, PS-352, PS-383, PS-341, PS-1, PS-2, eponemycin, MG132, CEP1612, PS-341, dansyl-Phe-Leu-boronate, MG273, Tyr-Leu<sub>3</sub>VS, NIP-Leu-Leu-Asn-VS, Ada-Tyr-Ahx<sub>3</sub>-Leu<sub>3</sub>-VS, Ada-Lys(bio)-Ahx<sub>3</sub>-Leu<sub>3</sub>-VS, dihydroeponemycin, omuralide, PS-519, ALLN, DCI, TMC-95-A, gliotoxin, EGCG, ritonavir, lovastatin, aclasinomicin A, and cyclosporin.

Regardless of which Group is elected, Applicant is required, in reply to this action, to elect a single species that is part of the elected Group (i.e. a fully defined sequence with SEQ ID NO and/or chemical structure) to which the claims shall be restricted if no generic claim is finally held to be allowable. The chemical structure of the elected species must be fully defined, i.e. an abbreviation such as "PS-519" is insufficient unless it is connected to a specific structure. The reply must also identify the claims readable on the elected species, including any claims

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subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The following claim(s) are generic: 1-10, 13-22 and 24.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the species lack a common structure and therefore lack unity *a priori*.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Bradley whose telephone number is (571) 272-9044. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cmb

  
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